

The University of Chicago

**THE BEGINNINGS OF DARWINIAN
ETHICS: 1859-1871**

**A PART OF A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE
HUMANITIES IN CANDIDACY FOR THE DEGREE
OF DOCTOR OF PHILOSOPHY**

**DEPARTMENT OF ENGLISH LANGUAGE
AND LITERATURE
1937**

**By
KENNETH FRANKLIN GANTZ**

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THE BEGINNINGS OF DARWINIAN ETHICS

1859-1871

BY KENNETH FRANKLIN GANTZ

Ethical problems, as even the casual observer knows, were of signal importance in Victorian literature and thought, and no small part of that intense scrutiny of the moral being of man evident in the closing quarters of the nineteenth century proceeded from the evolutionary thought of the Victorian Renaissance. To not a few the importance of man's conduct in the vast scheme of things had become very questionable, and it is evident that with many the traditional morality had lost its authority. There issued a search for new motives and new sanctions for right conduct. One result, as is well known, was the derivation of an ethic and a theory of the origin and development of morality from the principle of natural selection, the survival of the fittest.

In his *The Descent of Man* (1871) Darwin devoted three chapters to outlining such a theory, and among his books this one was second only to *The Origin of Species* in arousing controversy, much of which centered around the proposition of a natural origin of man's moral being. *The Descent of Man*, as a result of its application of the idea of natural selection to the exposition of moral origins, has customarily been held to be a landmark in the history of ethics, and justly so; for to Darwin's name and to the interest in the long awaited pronouncement of the master on the bearing of his theory on the past of man—a topic which except for one sentence he had avoided in *The Origin of Species*—was due the fruitful debate over evolutionary ethics which followed its publication. It is, moreover, from *The Descent of Man* that many of the subsequent advocates of evolutionary ethics drew their inspiration.

But, as Darwin indicates in his text, *The Descent of Man* was not unanticipated by concepts of the evolution

of morality by natural selection; and in view of the importance of the history of contemporary ethics to the student of Victorian letters and thought, it seems worth while to examine in some detail the period intervening between *The Origin of Species* (1859), before which the concept of natural selection was generally unknown, and *The Descent of Man*, in order to ascertain what influence the idea of natural selection had upon ethical speculation before Darwin himself spoke on the subject. Such an examination reveals that earlier than *The Descent of Man*, usually held to be the origin of Darwinian ethics—that is, ethics based on the principle of natural selection—there had accumulated a large mass of material on the origin and development of morals by natural selection. But although Darwin has himself acknowledged his sources and certain later writers have noticed them,¹ this material has in the main been passed over in silence. Nor did Darwin by any means indicate the extent to which it was available, to anyone interested in such matters, in the books and the periodicals and the scientific journals of the 1860's. Before the appearance of *The Descent of Man*, however, Darwinian ethics was not presented formally; there were no systems built on it; moreover, despite the number of such topics broached, the typical discussion of morality contained no inkling of the evolutionary approach, and it remained for Darwin to assemble into a coherent and systematic account and to present to the attention of the world much of the data the 1860's had produced concerning the evolution of morals.

In general the ethical concepts of Darwinism developed chronologically through three phases. The first, which ends in 1863, was a period of general silence so far as any ethical implications of Darwinism are concerned, the few comments which were relevant being merely incidental.

¹For example, Jacob Gould Schurman, *The Ethical Import of Darwinism* (New York, 1887); and James H. Tufts, "Darwin and Evolutionary Ethics," *The Psychological Review*, XVI (1909), 195-206.

The second period was inaugurated in 1863 by a new spirit in the study of anthropology: the investigation of the moral and intellectual characteristics of man was to be given more attention, and in this investigation the concept of natural selection became a frequent mark of reference. A third period may be discerned beginning in 1869 with the appearance in several places of the idea that natural selection alone or unaided was not sufficient to account for the evolution of man's moral and intellectual being. In view of the suggestive nature of the materials, I have thought it best to present them topically within chronological divisions so that this paper might afford not only a guide, for the 1860's, to the bibliography of the evolution of morality by natural selection but also some clue to the concepts advanced and their chronological development.²

I. NATURAL SELECTION IN ETHICS (1863-1868)³

Anthropology, a science closely connected in the 1860's with the study of the origins of morality, experienced a

²It must also be remembered that there were several bodies of material in the 1860's which, in the light of biological evolution, furnished a background for evolutionary ideas of the origin of morals. The utilitarian ethic was particularly appropriate, as natural selection is itself a principle of utility. The work of Max Müller on the history of language and on comparative mythology popularized theories that the Hebrew and Christian narratives, and even the terminology of morality, had emerged by evolution from non-moral significances and connotations. In 1861, Sir Henry Sumner Maine published an important and pioneering treatise on the history of jurisprudence which had evolutionary implications. Even before *The Origin of Species* Herbert Spencer had laid down an evolutionary hypothesis concerning the origin of morals which was based on biological evolution, although it lacked a *modus operandi*. Finally, the efforts to refute the "degradation" of man according to the Christian dogma of the Fall drew attention to the great influx of evidence as to the condition of primitive man and were a source of ideas about the evolutionary derivation of morals.

³The occasional and fragmentary statements of the first period, 1859-1862, bearing on the present question are included in the appropriate subdivisions of this period.

sudden development in that decade,⁴ and Dr. James Hunt's inaugural address in 1863 before the newly-founded Anthropological Society of London may well be considered a manifesto of a new spirit in ethical as well as in anthropological studies. It laid down a program of investigation of the mental and moral characteristics of mankind, which had been neglected for the physical. Concerning the origin of man, Dr. Hunt declared that knowledge would be gained only by the inductive and deductive treatment of evidence, the folly of attempting to solve the problem by abstract logic having been demonstrated by the lack of results. In a new study of man he would reject anthropological evidence from uncorroborated historical materials, and he would dismiss the great mass of travel literature, then much relied upon, as worthless to science because of the lack of objectivity on the part of the observers, who were frequently influenced by some preconceived dogma. Indeed, he wished the Society to give up all dogmas, to confess ignorance of the laws regulating man's origin and development, and to be willing to begin *de novo*, basing opinions only upon actual demonstrable facts and arguing solely from the logical inferences from such data.⁵

Four months later there was another declaration for the "new spirit," which reached a wider audience. A reviewer in the *Saturday Review* called for a modern investigation of ethics and condemned the sterility of the speculations of the *a priori* moralist. Although he displayed no idea of natural selection as a key to ethical study, he wished to substitute for logical investigation an empirical one which was practically that adopted by the followers of Darwin in the sixties. He advocated the use of scientific terminology, observation of man in his real state, study of the morals of primitive man and of the instinct of animals, and abandonment of the dichotomy between physical and intellectual

⁴Cf. an address by Dr. James Hunt, President of the Anthropological Society of London, reported in "The Manchester Anthropological Society," *Anthropological Review*, V (1867), 15.

⁵James Hunt, "Introductory Address on the Study of Anthropology," *Anthropological Review*, I (1863), 1-20.

man.⁶ By 1865 anthropological works were taking a prominent place in scientific literatures⁷ and offering their readers important materials bearing on the evolution of morality.

In the only passage devoted to man in *The Origin of Species* Darwin had pointed the way to the application of the theory of natural selection to the evolution of the capacities of mind;⁸ but the first person publicly to emphasize the relation of natural selection to morality, and the possibility of an evolution of morality by that means, was Thomas Henry Huxley, who stated, in 1862, that the moral faculty was capable of evolution by natural selection.⁹ In 1864 Alfred R. Wallace, co-discoverer of natural selection, presented an important paper in which he attributed the arrest of the physical evolution of man to the development by natural selection of the mental and moral powers.¹⁰ His thesis was that the Darwinian hypothesis is capable of explaining why there have been no physical changes in man in the lengthy period of record. Other animals, he said, are forced into bodily change by changes of environment, but once man had risen to the level of mental adaptability, he could combat such changes by the agency of mind. Henceforth the capacities which enabled man to devise weapons or new social combinations when the environment changed, were the capacities which needed to be strengthened and which, rather than his body, were modified by natural selection.

A year later John McLennan's *Primitive Marriage* (London, 1865) contributed to the recognition of the possibility

⁶"Whewell on Mackintosh," *Saturday Review*, XV (1863), 764.

⁷"Contemporary Literature," *Westminster Review*, LXXXIII (1865), 601.

⁸Charles Darwin, *The Origin of Species by Natural Selection* (2d ed. reprinted; New York, 1867), p. 424.

⁹Thomas Henry Huxley, "Six Lectures to Working Men 'On Our Knowledge of the Causes of the Phenomena of Organic Nature'" [1864, delivered 1862], *Collected Essays*, II (New York, 1893), 471.

¹⁰Alfred R. Wallace, "On the Origin of Human Races," *Journal of the Anthropological Society of London*, *Anthropological Review*, II (1864), clviii-clxxxvii.

of an evolution of morals. McLennan used the concepts of evolution and the struggle for existence to explain certain phenomena in marriage ceremonies, social laws and customs forbidding the marriage of individuals of particular relationships to each other, types of marriage, and systems of kinship. In so doing he demonstrated the importance of two sources of inquiry for further study of the history of morality: the observation of primitive societies and the analysis of the symbolical existence of barbaric customs among civilized peoples. By these means he traced the evolution of the idea of marriage from promiscuity to Christian monogamy, and showed that the "morals" of modern marriage are tied by descent with the evolution of kinship and succession under the influence of conditions affecting the number of women available.

Another book which drew increased attention to the existence of evidence among present-day savages as to the condition of primitive man, was E. B. Tylor's *Researches into the Early History of Mankind* (London, 1865). Tylor himself, in a paper to the Royal Institution, defended the thesis that in the history of man's mental condition there is "an upward progress, a succession of higher intellectual processes and opinions to lower ones," and attributed to natural selection man's advance from his primeval low mental state. Of especial importance was his alignment with the new spirit of ethical investigation by his insistence upon the use of ethnological data in the study of man's primeval condition and the evolution of morals.¹¹

Controversy in the public periodicals was also displaying to general attention the possibility of an evolution of morals. The publication in 1867 of a new edition of Buckle's *History of Civilization in England* aroused a debate over the immutability of moral truth. A writer in the *North British Review* held that, contrary to Buckle, there is a development of the great moral maxims, and to

¹¹Edward B. Tylor, "On Traces of the Early Mental Condition of Man," *Proceedings of the Royal Institution of Great Britain*, V (1866-69), 83-93.

explain such a development he called upon "self-preservation" and natural selection working amid changing social circumstances.¹² John Morley, then editor of the *Fortnightly*, entered this controversy; but, though he agreed that moral maxims have evolved, he showed no direct Darwinian influence at this time.¹³ Finally, Spencer's theory of the origin of consciousness in the reflex reactions of the lowest forms of life, and its development through the inheritance of habitual patterns of reflexes and their associations, was attracting notice. Impressions of Spencer's supposed utilitarianism in morality were becoming so current that he was led to express his views on the origin of the moral sentiments definitely and in popular form. He found the primary basis of morality in the order of nature and the origin of moral knowledge in experience with that order, the origin of the moral sentiments in sympathy, of sanctions in recognition of utility, of virtues in utility.¹⁴

Of immediate relevance to the question of an evolution of morals was the possibility of the existence of moral sentiment in the lower animals; and although it has been stated that before *The Descent of Man* there were no attempts to approach the moral problem exclusively from the data of natural history,¹⁵ there were many in the 1860's who accepted the possibility as fact and assigned the origin of the moral sentiments of man to similar elements in his animal forbears.

From about 1839 Darwin had been convinced of the natural origin of emotion, upon which, of course, he assumed that moral sentiments depended.¹⁶ In 1859 he

¹²"The Natural History of Morals," *North British Review*, XLVII (1867), 359-403.

¹³John Morley, "A Fragment on the Genesis of Morals," *Fortnightly Review*, IX (1868), 330-38.

¹⁴Herbert Spencer, "Morals and Moral Sentiments," *Fortnightly Review*, XV (1871), 419-32.

¹⁵Tufts, "Darwin and Evolutionary Ethics," *Psychological Review*, XVI, 201.

¹⁶Charles Darwin, "Autobiography," in Frances Darwin's *Life and Letters of Charles Darwin* (London, 1888), I, 95.

expressed a belief in the evolution of man's mental powers from a low origin by natural selection and denied the necessity of the intervention of creative power to account for man's advanced state of being.¹⁷ At this same time it was his opinion that animals possess reason,¹⁸ and a few years later, in 1868, he called attention to the variation in mental attributes of individuals of a species.¹⁹

In 1861 Huxley remarked on the psychical affinity of man and animal and on the presence of moral emotions in the latter, and implied the origin of man's higher mental and moral faculties in the lower ones of the animal.²⁰ A year later he attributed the higher development of those qualities to the power of speech, which enables man to transmit experience. Succeeding generations, therefore, have the advantage of accumulated knowledge. By his quality of speech alone, he decided, is man distinguished from the brute.²¹

Sir Charles Lyell, the third of the generation's three wise men in matters evolutionary, also found it impossible to draw a distinction in kind between the intellectual and moral faculties of animals and those of men. He believed that animals possess individuality, intelligence, and morals, and agreed with Huxley on the possibility of tracing man's faculties far back in the animate world.²²

Thus the trend of thought with the leaders of science was decidedly towards belief in the presence of the rudiments of morals in the animals. The traditional concept of man's moral nature as a thing unparalleled in the creation, as the gift of God solely to man, was breaking down

¹⁷Darwin to Charles Lyell, Oct. 11, 1859, *ibid.*, II, 210-11.

¹⁸Cf. Darwin to Asa Gray, Nov. 26, 1860, *ibid.*, II, 354.

¹⁹Charles Darwin, *The Variation of Animals and Plants under Domestication* (2d ed. reprinted; New York, 1876), II, 404.

²⁰Thomas Henry Huxley, "On the Zoological Relations of Man to the Lower Animals," *Natural History Review*, I (1861), 68.

²¹Huxley, "Six Lectures to Working Men," *Collected Essays*, II, 473-4.

²²Sir Charles Lyell, *The Geological Evidences of the Antiquity of Man with Remarks on the Origin of Species by Variation* (London, 1863), pp. 493-5.

in an age which, on the whole, stoutly defended the divine origin of man's moral being.

In 1864 two anonymous articles appeared, neither written by an evolutionist, which indicate that the idea of moral sentiments in animals was not confined to pioneering scientists or to radical circles. The first article denied a generic point of distinction between man and animals on any ground whatsoever. In any such qualities as might be compared, the difference would be found to be merely one of degree. Animals possess reasoning ability, a rudimentary language, the power of abstraction, anatomic structure like that of man, upright position, moral character, emotional expression, self-consciousness, perfectibility or "improvable reason," moral perceptions, memory and will, a sense of religion in that they fear the unknown, which is all that certain tribal religions resolve themselves into, a soul, by the definitions giving one to man, and immortality, by the same general arguments seeking to establish that of man. While the writer of this article admits that animals possess only the rudiments of these attributes, he asserts that some men also certainly possess them only in a very low degree. He does not, however, view these rudiments as one seeking evidence for their evolution into the higher faculties which distinguish man.²³

The second article regarded the rudiments of morals among animals to be evidence not of evolution but of intuition. The author of this article argued that as there is hardly any moral virtue of which some animal does not show a trace, it is superficial to consider animal nature as a mere mass of violent, unregulated passion; and since animals cannot reason and since moral principles are dependent upon some sort of rationality, these traces of morality must be due to intuition.²⁴

²³"The Distinction between Man and Animals," *Anthropological Review*, II (1864), 153-63.

²⁴"The Moral Relations of Men and Animals," *Saturday Review*, XVIII (1864), 145.

By 1865, Francis Galton, cousin of Darwin and pioneer of statistical psychology, was proclaiming moral and religious sentiments to be direct products of the herd instinct brought to its highest form by natural selection. He traced the origin of morality to affection among animals, upon which, in one or all of four forms—sexual, parental, filial, and social—he asserted the life of all except the lowest type of animals to depend. For an animal's well-being, disinterestedness, he said, is as essential as selfishness, because no animal lives entirely for itself, but must occasionally live for its mate, its parent, its offspring, or its fellow. Sympathy has its origin in natural selection working on the affections. By preserving those variations in the affections which are most suitable to given circumstances, natural selection culls out those which deviate too widely from the necessary standard. It might be expected, he concluded, to develop sympathy among men, even among the lowest barbarians, to a greater degree than among animals.²⁵

In 1867 Wallace deduced from the imitation of animal by animal in protective coloring, the agency of which he believed to be natural selection, that animal faculties of perception and emotion must be of the same nature as those of man. This he considered to be "a fact of high philosophical importance in the study of our true relations to the lower animals."²⁶ When one considers Wallace's close adherence to the theory of natural selection at this time, it seems that the relation that was indicated between man and animal must have been one of descent. In another paper of the same year Wallace attacked the idea that birds build their nests by instinct, that is, in accord with innate ideas. He concluded "that the mental faculties exhibited by birds in the construction of their nests, are the same in kind as those manifested by mankind

²⁵Francis Galton, "Hereditary Talent and Character," *Macmillan's Magazine*, XII (1865), 323-4.

²⁶A. R. Wallace, "Mimicry, and Other Protective Resemblances among Animals," *Contributions to the Theory of Natural Selection, a Series of Essays* (2d ed.; New York, 1871), pp. 127-8.

in the formation of their dwellings. These are, essentially, imitation, and a slow and partial adaption to new conditions."²⁷

One obstacle to finding an origin for morality in unmoral mental activities such as those of animals or even first-evolved men was doubt as to the possibility of the development of the lower mental processes, like instinct, into intellect. In his *Principles of Psychology* (1855) Herbert Spencer had provided a hypothesis for such a development, and he repeated it in a *Fortnightly* article in which he also traced the rise of the moral sentiments from sub-human sources.²⁸ Although Spencer's hypothesis of the origin of moral sentiments did not directly embody the principle of natural selection, it was of especial importance; for, based on the concept of biological evolution, it brought the rationalistic utilitarian ethic into accord with Darwinism.

Attention was being called to certain differences among the races, classes, and types of men which had a bearing on the possibility of an evolution of morals. Not only are there physiological differences indicative of varying biological histories, but there are psychological and moral differences suggestive of variation in the development of moral being. If races present inherently peculiar moral reactions, if some peoples are entirely without them, and others, though civilized, are without those which might be thought implied in any system of morality natural to man, if even sections and types of the same populations do not seem by nature morally close akin,²⁹ it is reasonable to presume that man's moral being has originated and developed

²⁷A. R. Wallace, "The Philosophy of Bird's Nests," *ibid.*, p. 229.

²⁸Spencer, "Morals and Moral Sentiments," *Fortnightly Review*, XV, 419-32. Cf. *supra*. As Spencer's hypotheses concerning the evolution of mind and of moral sentiments are well known, attention is directed without discussion to their relevancy to the present topic.

²⁹Cf. James Hunt, "Address Delivered at the Third Anniversary Meeting of the Anthropological Society of London," *Journal of the Anthropological Society, Anthropological Review*, IX (1866), lxxviii; John Lubbock, *Pre-historic Times* (London, 1865), pp. 355, 365; "The Descriptive Anthropology of Persia," *Anthropological Review*, VI (1868), 29; "The Early History of Man," *North British Review*,

by processes involving variation and consequent conditioning by diverse circumstances. No theory of multiple origin would be plausible if extended sufficiently to explain so much variation. Evidences such as these, regardless of the construction put upon them by those presenting them, must have been, to many, highly suggestive of an evolution of morals and also, variation being essential to natural selection, of Darwin's principle.

Likewise relevant to the possibility of an evolution of morality were the several pronouncements that most of the savage peoples were devoid of religion. As for an ethical religion, that was the last stage in a long development.³⁰ Concerning the "belief in God, and the idea of his hating sin and loving righteousness," the opinion was expressed that probably there was a time when no human thing had such a conception, that certainly there are living savage tribes who do not have it.³¹ The Darwinian scientists were agreed that man's religion, which he had at one time been without, had come into being by natural and evolutionary processes.

It was the work of Francis Galton on the inheritance of intelligence that established the idea of the possibility of the hereditary transmission of man's moral being, and it is upon variations and improvements in that moral being and their inheritance in subsequent generations that an evolution of man's moral nature depends. In 1865 Galton published an important article which reveals his conviction that psychical qualities in man and the lower animals are hereditary and under the control of selective breeding. He believed that every special quality depends upon a variety of conditions, and he held that the entire character might be altered by the modification of any one

L (1869), 286-7; "Meeting of the British Association," *Quarterly Journal of Science*, VI (1869), 608; "Race in Religion," *Anthropological Review*, IV (1866), 289-320.

³⁰Cf. John Lubbock, *The Origin of Civilization and the Primitive Condition of Man* (American ed.; New York, 1871), pp. 114 ff.

³¹"The Early History of Man," *North British Review*, L (1869), 284-5.

of these conditions. He cites, as evidence of the hereditary nature of character traits, the distinctive character of entire races, such as the American Indian and the Negro. Even varieties within each race have their own peculiar character traits. Types of character, therefore, could be bred, and evil conduct can be attributed, at least in part, to the inheritance of undesirable qualities of character, such as a craving for drink or an inability to perceive utilitarian ends. Acquired virtuous habits cannot be inherited, but the tendency to acquire them can.³² In his *Hereditary Genius* (1869), Galton continues along the line of his earlier article, although again his chief interest is the inheritance of intellectual qualities. Applying statistical methods to this problem, he points out that moral gifts follow the law of deviation from an average just as do physical characteristics.³³

The evolution of morals was linked even more closely with biological evolution by speculations that the moral being of man, as a product of mental power, is merely a function of his physiological structure, which in turn is merely a combination of matter and the animation of which is a function of that matter. Good and bad conduct, theories of good and evil, ethical codes—all have their basis in changes, controlled by and responding to the laws of matter, within the material structure of the mind, because thought is merely a function of the brain stuff; and, moreover, brain itself is the product of an evolution traceable back through lower and lower forms until mind is found emerging from sensation, and back farther until sensation is found emerging from animated matter.

Spencer had laid down the principle of organic memory in his *Principles of Psychology* (1855). The predisposition to certain patterns of action and thought, such as

³²Galton, "Hereditary Talent and Character," *Macmillan's Magazine*, XII, 157-66, 318-27.

³³Francis Galton, *Hereditary Genius: an Inquiry into its Laws and Consequences* (American ed.; New York, 1870), p. 282.

instincts, and the combination of impression into compound ideas of good and evil, he held to be the result of ages of experience impressing itself upon the organism by effecting changes in the nervous structure, which changes are transmissible through the generations.³⁴ Structure, then, is the ultimate basis of right and wrong.

In 1862, Huxley, in applying the principles of variation and natural selection to the development of the moral faculty, had declared that moral functions are the result of structures and of the molecular forces which they exert.³⁵ By the middle sixties there were current in prominent scientific meetings expressions of opinion as to the probability of a purely physical basis for all phenomena of life.³⁶ Assuming his frequent rôle of popularizer of the new ideas, Huxley made in 1868 an address in Edinburgh, on the physical basis of life. He explained that in animals and plants the structural unit of the living body is made up of the same material, protoplasm, and that vital action and even thought itself are ultimately based upon molecular changes in this life stuff.³⁷ Science was also pushing into the relation of thought and physiological conditions. Galton had an inkling of the influence that bodily states have on attitudes of mind: he saw a "frequent correlation between an unusually devout disposition and a weak constitution."³⁸

Although the beliefs of the Darwinians concerning the nature of evil were not necessarily based upon the principle of natural selection, they were naturally in conformity with the theory of biological evolution. They may, therefore, be considered as such views as probably would underlie

³⁴Cf. *Principles of Psychology* (1st ed.; 1855), pp. 394-412, cited in the *Westminster Review*, XC (1869), 510-1.

³⁵Huxley, "Six Lectures to Working Men," *Collected Essays*, II, 471-2.

³⁶Cf. James Hunt, "On the Doctrine of Continuity Applied to Anthropology," *Anthropological Review*, V (1867), 119-20.

³⁷Thomas Henry Huxley, "On the Physical Basis of Life," *Collected Essays*, I (New York, 1893), 154.

³⁸Galton, *Hereditary Genius*, pp. 263-7.

any attempt to base a system of ethics upon that principle. An ethical system conforming to the theory of biological evolution might very well look upon good and evil as inherent in the order of things; otherwise they could not exist. Conduct, then, must be judged in relation to that order.

To Huxley, evil was not the will of God but rather the result of natural phenomena, within and without man, and as such might be dealt with and to a certain extent ameliorated.³⁹ Evil is one of the results of the working of the laws of nature and, regardless of any theory of sin, is a part of the lot of all organisms. Inhabitants of a universe moved by inexorable law must feel its force. This, in their consciousness, they label evil. Nature, then, is the source of moral law as well as of scientific law, and the general propositions of morality, which result in happiness or misery as they are correctly or incorrectly applied, can be deduced from it and can be verified in the experience of life.⁴⁰ Darwin also thought of pain and suffering as "the inevitable result of the natural sequence of events, *i.e.*, general laws. . . ."⁴¹ Spencer believed that "all evil results from the non-adaptation of constitution to conditions. . . ."⁴² In such views of the source of evil can be seen emerging a theory of morals recognizing natural selection as the basis for the norm of human conduct.

The Darwinians' view of reward and punishment was derived from their conception of the source of good and evil. They discarded the Christian belief in other-world compensation for the belief that man must be governed by the "customs of matter" and that the penalty for devi-

³⁹Thomas Henry Huxley, "A Liberal Education: and Where to Find It," [1868], *Collected Essays, III* (New York, 1893), 90-2.

⁴⁰Thomas Henry Huxley, "On the Educational Value of the Natural History Sciences," [1854], *ibid.*, pp. 58-62.

⁴¹Darwin to Mrs. Boole, Dec. 14, 1866, *Life of Darwin*, III, 64.

⁴²Quoted by Tufts, "Darwin and Evolutionary Ethics," *Psychological Review*, XVI (1909), 201.

ation from them is pain. Man must adapt himself to all his conditions of existence if he would avoid punishment.⁴³

"Original sin" also had a natural explanation. During the middle sixties attacks upon the great central dogma of Christianity were numerous. In one of these Galton, arguing from natural selection, struck at the belief in the Atonement by proposing a psychological explanation for belief in a "fall." Man's sense of "original sin," he asserted, is a result of his rapid rise from a low state. In civilized man yet linger relics of the cave man. His recent advance has left him with many of the traits and instincts of barbarism, an inner complex of impulses, "weaknesses of the flesh," failures of intelligence, all of which thwart his conscious social sense, or conscience. Religious sentiment has developed more rapidly, at least among some members of the community, than savage traits have declined, and the sense of original sin is man's recognition of this anomaly in his character. The more recently any people have been in barbarism, the more they feel the disparity between their character and their moral vision. Natural selection, then, has not harmoniously developed man's traits, and the resulting conflict in his character has been summed up by him in his doctrine of original sin.⁴⁴

The question of free will or necessity, which underlies that of the ultimate responsibility of man for his conduct, was considered insoluble by representative Darwinians, who consequently put it aside as an unfruitful subject for discussion. As an example, Huxley's attitude can be cited. Materialistic necessity, according to Huxley, involves a grave error; it is beyond philosophic inquiry. The other extreme in belief, spiritualism, is even worse, as it does not approach the facts of human experience. Man's ultimate responsibility for his conduct, which depends upon his being a free moral agent who can choose between two lines of action, is then set aside by Huxley,

⁴³Cf., for example, Huxley, "A Liberal Education," *Collected Essays*, III, 83-6.

⁴⁴Galton, "Hereditary Talent and Character," *Macmillan's Magazine*, XII, 327. Cf. Galton, *Hereditary Genius*, p. 349.

who in the last issue cannot decide between free will and necessity. But remaining agnostic on that issue, he will move about only in the world of fact and law. There is what seems to man to be, for all practical purposes, cause and effect, and man seems to be able, also for all practical purposes, to bring to bear by his own volition some influence on that succession of events he labels cause and effect. It can be said, then, that so far as the immediate world is concerned Huxley held man to be a free moral agent whose conduct can be measured by natural law, which expresses the inevitable sequences that are noted among things, an agent whose rewards and punishments are meted out to him as the apparent result of his apparently free interference with those sequences.⁴⁵

For two decades after the appearance of *The Origin of Species*, many believers in Darwinism were cheered by the thought that natural selection assured the inevitable progress of man. Not only had natural selection elevated him intellectually and morally to a high standard by culling out retarding individuals, but it would continue, perforce, to raise him to a higher one. This optimistic doctrine is appropriately termed by Professor Morris R. Cohen the "myth of evolution." There was nothing new about the idea of perfectibility, but the theory of biological evolution, which after Darwin's pronouncement of the principle of natural selection was able to provide a *modus operandi* for the perfection of man that seemed a part of the natural order, gave that doctrine scientific plausibility.

Even before 1859 Spencer had linked the idea of the progress of man with that of biological evolution. Although not writing from the standpoint of natural selection, he had declared that all evil is the result of non-adaptation of constitution and conditions, but that adaptation is constantly going on, that evil perpetually tends to disappear, and that the ultimate development of the ideal man is

⁴⁵Huxley, "On the Physical Basis of Life," *Collected Essays*, I, 158-64.

therefore logically certain.⁴⁶ One of Wallace's conclusions in his important article of 1864 was that the power of natural selection must ever lead to man's more perfect adaptation and must, consequently, continue to improve his moral nature.⁴⁷ Sir John Lubbock and Sir Charles Lyell both believed that natural selection implied the inevitability of the mental and moral perfection of man.⁴⁸ Darwin, however, had said that he did not believe in a law of necessary development,⁴⁹ and there is no indication that Huxley, who was later prominent in the dispelling of the myth of evolution, ever subscribed to it. The implication of its truth, which many saw in the principle of natural selection, was nevertheless an important result of the impact of Darwinism on ethical thought in the sixties.

During the 1860's the idea of natural selection was applied to the problem of the origin and development of civilization and to its future. Walter Bagehot, writing for the *Fortnightly Review*, attributed the advance of man into the civilized state to the natural selection of improved relationships resulting from moral causes. He found that man, uplifted by moral improvements, themselves the product of natural selection and the influence of certain other factors, had come from an anarchic state to a political one and that by natural selection the better polities had suppressed the poorer ones. Civilization had advanced by the selection of variations, and will continue to advance, he thought, as variations are allowed to present themselves for natural selection.⁵⁰

There were also opinions, derived from consideration of the interference of contemporary moral practices with

⁴⁶Cf. Ernest Albee, *A History of English Utilitarianism* (London, 1902), p. 278.

⁴⁷"On the Origin of Human Races," *Anthropological Review*, II, clxix.

⁴⁸Cf. Lubbock, *Pre-historic Times*, pp. 491-2; Sir Charles Lyell, *Principles of Geology*, II (London, 1868), 488-9.

⁴⁹Cf. Lyell, *Principles of Geology*, II, 488.

⁵⁰Walter Bagehot, "Physics and Politics," *Fortnightly Review*, VIII (1867), 518-38; IX (1868), 452-71; XII (1869), 58-72.

natural selection, concerning the survival of civilization that were the antithesis of the optimistic myth of evolution. For convenience these speculations may be termed Nietzschean (although they anticipated the master of evolutionary ethics) since they implied a strict application of the principle of natural selection to the definition of good and evil which replaces the Christian moral precepts with such ones as: evil is weakness; good is that which fits for survival; virtue—in its accepted definition—is a source of degeneration.

Francis Galton was the first in the sixties to suggest the beneficial effect on civilization which would follow the application to man of the principle of selective breeding; he pointed out the deleterious results which had followed certain deliberate violations of this principle. Judicious marriages, he declared, were the only way to make progress toward the superman.⁵¹

Certain Darwinians entertained pessimistic views of the effect of modern humane practices and of the organization of society upon the race. An article, attributed by Darwin to W. R. Greg,⁵² declared that contemporary civilization was bringing about the degeneration of its constituent population. Greg seems to approach a definition of evil as weakness, for, if natural selection is a "righteous" principle, then that which fits for survival must be good,⁵³ as his discussion implies throughout. The substitution of mental for physical evolution, which Wallace had described as checking physical changes in man, has culminated in a civilization which, according to Greg, has suspended, and in some cases reversed, the law of natural selection. Although natural selection yet continues to work among the races of men—where the abler, stronger, and

⁵¹Galton, "Hereditary Talent and Character," *Macmillan's Magazine*, XII, 163.

⁵²Charles Darwin, *The Descent of Man and Selection in Relation to Sex* (American ed.; New York, 1872), p. 161n.

⁵³Cf. Ralph Barton Perry, *The Present Conflict of Ideals* (New York, 1918), pp. 130-1.

the more advanced races are still those favored in competition—among the individuals of a nation, and among the classes of a community, it has failed altogether, because the social, moral, and material complications of civilization have introduced elements which oppose it: artificial and conventional advantages have replaced natural ones as the ruling and deciding force in matters of survival and propagation.

For the interference with this law of natural selection, two great achievements of civilization are responsible, namely, respect for life and respect for property. Among animals and savages the weak in body and mind, the sick, and the deformed perish, but civilization keeps them alive to propagate their like. Security of property for transmission as well as for enjoyment gives the powers of wealth to thousands who themselves never could have acquired property by industry or courage or have defended it with strength or ingenuity. Instead of being pushed aside, they carry off the most desirable brides to be the mothers of a degenerating progeny. Not only the rich but also the class at the other extreme of the social scale are finding their physique and their morale impaired by the appropriation and concentration of property in the hands of the few. The classes of society which beget more than their proportional share of children are not the ones who should do so, if the larger benefit of society is to be considered. It is the very rich and the very poor who are likely to be preponderately the parents of the coming generation. Both marry as early as they please and have as many children as they please—the rich because it is within their power to provide for their offspring, the poor because they have no motive for abstinence. It is the middle classes, those who form the energetic, reliable, advancing element of the population, those who wish to rise and those who do not choose to descend in the social scale who abstain from or postpone marriage. Greg concludes that no laws imposed from above or from without can restore the correct operation of natural selection, as no modern people would endure the autocratic interference

and control which would be required. He finds left for hope only a spread of education and an increase in moral sensitivity.⁵⁴

In Greg's article are implications of the Nietzschean ethic: the slave morality, which coddles the unfit, as *böse*, the qualities which fit for survival as good, the dangerous life as productive of good, and the doctrine of the superman, at least in the sense of an improved race, physically and morally.

In 1869, within a year of Greg's article, appeared four other articles devoted to similar views. One declared that by basing present legislation upon the Darwinian theory to encourage the survival and the more rapid accumulation of desirable characteristics, it would be possible to influence the character and prosperity of future generations.⁵⁵ A second pointed out that moral development granted power to the weak to survive the strong, a condition which must lead to the physical degeneration of the race.⁵⁶ A third observed that sympathy and modern medicine interfere with natural selection and as a remedy suggested that those with diseases refrain from reproduction.⁵⁷ A fourth deplored the deleterious effect of civilization on racial health.⁵⁸

A clear anticipation of Nietzsche's "slave morality" appeared in Galton's article of February, 1871.⁵⁹ This slave morality, Galton asserted, is due to the fact that the gregarious instincts of man have been too well preserved

⁵⁴[W. R. Greg], "On the Failure of 'Natural Selection' in the Case of Man," *Fraser's Magazine*, LXXVIII (1868), 353-62.

⁵⁵"On Darwinism and National Life," *Nature*, I (1869), 183-4.

⁵⁶"Natural Selection among Mankind," *Saturday Review*, XXVII (1869), 274-5.

⁵⁷"The Action of Natural Selection in Man," *Westminster Review*, XCH (1870), 543-5.

⁵⁸John Henry Bridges, "Influence of Civilization on Health," *Fortnightly Review*, XII (1869), 149-61.

⁵⁹Francis Galton, "Gregariousness in Cattle and Men," *Macmillan's Magazine*, XXIII (1870-71), 353-7.

for the good of civilization. Galton himself summarized his article:

I propose, in these pages, to discuss a curious and apparently anomalous group of base moral instincts and intellectual deficiencies, to trace their analogies in the world of brutes, and to examine the conditions through which they have been evolved. I speak of the slavish aptitudes, from which the leaders of men, and the heroes and the prophets, are exempt, but which are irrepressible elements in the disposition of average men. I refer to the natural tendency of the vast majority of our race to shrink from the responsibility of standing and acting alone, to their exaltation of the *vox populi*, even when they know it to be the utterance of a mob of nobodies, into the *vox Dei*, to their willing servitude to tradition, authority and custom. . . . I shall endeavor to prove that the slave aptitudes, whose expression in man I have faintly but sufficiently traced, are the direct consequence of his gregarious nature, which, itself, is a result both of his primaeval barbarism and of his subsequent forms of civilization. My argument will be, that gregarious animals possess a want of self-reliance in a marked degree; that the conditions in the lives of those animals have made gregarious instincts a necessity to them, and therefore, by the law of natural selection, those instincts and their accompanying slavish aptitudes have gradually become evolved. Then, I shall argue, that our remote ancestors have lived under parallel circumstances, and that we have inherited the gregarious instincts and slavish aptitudes which are developed under those circumstances, although, in our more advanced civilization, they are of more harm than good to our race.

II. NATURAL SELECTION PLUS X IN ETHICS (1869-1871)

The year of 1869 marks a definite change of opinion on the part of several prominent Darwinians as to the extent of the agency of natural selection in the evolution of man, particularly in respect to his mental and moral faculties. Evolutionary phenomena inexplicable by natural selection alone were increasingly being noted, and various explanations adducing some unknown began to be advanced to account for them: (1) that natural selection must have been supplemented by the *saltus*, or sudden leap over intervening gradations in the course of evolution, (2) that it must have been directed by a "higher intelligence," or (3) that it must have been complemented by some natural force or forces yet unconceived.

Several years before 1869, Sir Charles Lyell had discerned the phenomenon of the *saltus*, rather by speculation than by close observation. He asserted that the theory of evolution by a series of infinitely small gradations did not explain the appearance of genius in a mediocre family. Likewise, as lone individuals have wrought important revolutions in the moral and intellectual worlds, it might be possible to explain the superiority of certain races of mankind as the result of such sudden advances in individuals. When it is reflected that mental qualities are transmissible by inheritance, it is possible, perhaps, to attribute to such *salti* the introduction of higher and higher forms and grades of intellect, so that at a remoter period there may have been cleared at one bound the space which separated the most elevated stage of the unprogressive mental powers of the inferior animals from the first and lowest form of the progressive reason of man. Such leaps are interruptions of the ordinary course of nature, and to account for them Lyell believed that variation and natural selection must be secondary to a higher, incomprehensible law of development, which has produced the moral and intellectual faculties by directing natural selection to the results of new and added causes inherent in the working of that higher law.⁶⁰

Francis Galton also discerned the infeasibility of explaining all evolutionary phenomena by a series of minute gradations of degree, but he did not wish to add to natural selection any other principle, only to extend it to include a culmination of variations accumulating and occasionally occurring simultaneously, so that the result appeared to be a *saltus*. He proposed the theory that there is a tendency in organisms to resist change in type, to overcome which required such unusual pressure toward variation that the yielding to pressure resulted in a *saltus*, an overthrowing of the stability of types. Galton fully agreed with Darwin that all forms of organic life are in some sense convertible into one another, as all have sprung from

⁶⁰Lyell, *Antiquity of Man*, pp. 489, 504-5.

a common ancestry; but he felt that the phenomena of conversion, or descent, could not all be termed insensible gradations, nor could there have been the tremendous number of intermediate links between types required by Darwin. Galton proposed that the organic world consists of entities, each of which might be compared to a spheroid with many facets on its surface, upon one of which it reposes in stable equilibrium. If, by the accumulated action of incident forces, this equilibrium is disturbed, the spheroid may be supposed to roll until it settles once more in stable equilibrium on another facet. Thus he enlarged the scope of the Darwinian principle to include with insensible gradation the selection of changes in type caused by an occasional kaleidoscopic shift within the organism.⁶¹

Sometime between 1867 and 1869 Wallace relinquished his opinion that natural law alone could account for all the qualities of man; in particular, it could not account for his moral being. As late as 1867, he had been solidly advocating the Darwinian principle;⁶² but at the meeting of the British Association, in 1869, while admitting that the evidence is overwhelming for man's steady advance in knowledge and intellect, he expressed his doubt that man had made any equal advance in moral feeling. Savages, he said, possess a moral sense which influences them just as much as civilized people are influenced by their moral sense.⁶³ Furthermore, even the extreme probability of man's descent from the animal cannot constitute evidence that man's intellectual powers and his moral nature were wholly developed by the same process that had produced his physical body.

In a review published in 1869 Wallace pointed out that anyone acquainted merely with the productions of unaided

⁶¹Galton, *Hereditary Genius*, p. 369.

⁶²Cf. "Creation by Law," *Quarterly Journal of Science*, IV (1867), 471-88; "Meeting of the British Association," *ibid.*, pp. 589-90; and A. R. Wallace, "On Natural Selection Applied to Anthropology," *Anthropological Review*, V (1867), 103-5.

⁶³Reported in "Meeting of the British Association," *Quarterly Journal of Science*, VI (1869), 609.

nature might reasonably doubt the possibility of producing such a creature as a dray-horse, for example, by the power of man directing the actions of the laws of variation for his own purpose. We know, however, that the dray-horse has been developed, and we also know that the laws of evolution alone would never have produced him, for there is no necessity in nature for such a creature. "We must therefore admit the possibility, that in the development of the human race, a Higher Intelligence has guided the same laws for nobler ends." The presence in low races of mental equipment beyond their needs seems to preclude the possibility of its being evoked by natural selection alone, which must respond to necessity.⁶⁴

In 1870 Wallace repeated and elaborated this argument.⁶⁵ The utilitarian hypothesis, which he characterizes as the theory of natural selection applied to the mind, Wallace does not believe adequate to account for the development of the moral sense. At first sight, he says, it would seem that such feelings as those of abstract justice and benevolence could never have been acquired by the preservation of useful variations, because they are incompatible with the law of the strongest, which is the essence of natural selection; however, if we consider not individuals but societies, justice and benevolence exercised within the tribe would strengthen the tribe. On the other hand, certain human faculties, such as the power to form ideal conceptions of space and time and the capacity for artistic feelings, are not so accountable, as they could have been of no possible use to man in his early stages of development or civilization. Nor can we so account for the development of the moral sense or conscience in savage man; for although the practice of benevolence or honesty or truth may have been useful to a tribe, such practice

⁶⁴[A. R. Wallace], "Sir Charles Lyell on Geological Climates and the Origin of Species," *Quarterly Review*, CXXVI (1869), 381, 391-4. The authorship of this article is established by Darwin. Cf. *Life of Darwin*, III, 116.

⁶⁵A. R. Wallace, "The Limits of Natural Selection as Applied to Man," *Contributions to Natural Selection*, pp. 351-6.

does not account for the feeling of sanctity attached to actions which each tribe considers right and moral, a feeling very different from that which they attach to the merely useful.

Wallace turns to the intuitional theory of a moral sense for a solution of the problem. In man's nature, he continues, there is a feeling of right and wrong, antecedent to and independent of experiences of utility. Where the relations between men are unrestricted, this feeling attaches itself to those acts of universal utility or self-sacrifice which are instigated by man's affections and sympathies and which he calls moral. Otherwise, it may be, and often is, perverted to give sanction to acts of narrow and conventional utility which are really immoral. Here Wallace separates an abstract sense, a mystical feeling for right and wrong, from all content of concrete action. This sense, as he interprets it, does not reveal what is right, but envelopes in a mystic sanction conduct which other criteria reveal as right. He talks of a natural appetite for right actions, even though this appetite is not capable of infallibly discerning right from wrong actions. It is this moral feeling which natural selection alone could not have developed in man and toward which a higher intelligence or law, utilizing the principle of selection, must have guided the evolution of man.

St. George Mivart, friend and pupil of Huxley, felt in 1868 certain difficulties as to the theory of natural selection—that the Darwinian system could not account for the origin of the human intellect or, above all, its moral intuitions. In 1869 he told Huxley that he must enter this subject controversially,⁶⁶ and the result was his *Genesis of Species* (1871). His object was to affirm his belief that natural selection operates but that it requires to be supplemented by the action of some natural law or laws yet undiscovered.⁶⁷ To it he adds another evolutionary

⁶⁶St. George Mivart, "Some Reminiscences of Thomas Henry Huxley," *Nineteenth Century*, XLII (1897), 994–5.

⁶⁷St. George Mivart, *On the Genesis of Species* (2d ed.; London, 1871), p. 5.

process, neither excessively minute nor fortuitous in its action, namely, specific genesis of types as the result of the presence in organisms of innate forces directed by some unknown teleological principle.⁶⁸

Mineral species, Mivart says, must possess an internal power or force by which their crystals "not only assume their external symmetry, but even repair it when injured." Chemical elements also possess innate powers to form certain unions. Likewise, in the organic world there is, according to the authority of Herbert Spencer, an innate tendency in physiological units to assume the parent form from which they spring. If, then, innate powers must be attributed to mineral species, to chemical atoms, and to physiological units, it is only reasonable to attribute these powers to individual organisms. The conception of such internal and latent capabilities and their use by external power, Mivart continues, may be illustrated by one of Galton's spheroids with its many facets. The innate tendency of an organism to certain considerable and definite changes would correspond to the facets on the surface of the spheroid. As for the force that upsets the equilibrium of the spheroid, it is quite conceivable that the simultaneous action upon it of all known forces may result in changes which are harmonious and symmetrical.

For physical theories, Mivart concludes, there are but two alternatives: they must rest ultimately on the conception of innate power or on one of will force. Even the explanation of the celestial movements ends in the conception that every particle of matter has the innate power of attracting every other particle directly as the mass and inversely as the square of the distance. If one does not accept the view that volition is the only force and that all phenomena whatsoever are the immediate results of the action of intelligent and self-conscious will, he is logically driven to the conception of innate powers. Of these alternatives Mivart prefers the latter, for sudden changes—saltatory actions in nature—must be conceived

⁶⁸*Ibid.*, pp. 260-5.

as orderly and according to law, because the whole cosmos is so. Any such quality in man as moral intuition must, according to Mivart's theory, be the result of a *saltus* in the evolution of man in response to the innate tendency to change under the pressure of a teleological force.

III. CONCLUSIONS, WITH REFERENCE TO

The Descent of Man

It has been shown that, in the period between *The Origin of Species* and *The Descent of Man*, the idea of natural selection was applied to, or itself influenced, many phases of ethical inquiry. By providing a *modus operandi* it made plausible the evolution of the moral sentiments and of morality, even from the traits of the lower animals. It gave a semblance of scientific foundation to the hope for the perfectibility of man, and at the same time it aroused fear that civilization would degenerate because of its failure to operate under the influence of extreme group morality. It was associated with the establishment of the hereditary nature of moral qualities, with agnostic speculations about responsibility, and with naturalistic explanations of evil. Finally, its strict application to conduct suggested a new code of moral precepts based upon itself. During the closing years of the period, however, there was the expression of belief on the part of some that natural selection alone was insufficient to account for man's moral development, that it needed the aid of other forces.

In view of the disclosure of abundant material from 1859 to 1871 pertaining to the evolution of morals by natural selection, Darwin's *The Descent of Man* must be taken as inaugurating a second rather than the first phase in the history of Darwinian ethics. Although its publication elicited a great increase of attention to the possibility that man's moral nature and his morality were the result of an evolution, and a sharp controversy followed, repeating only in lesser degree and with shorter duration that which succeeded *The Origin of Species*, yet the rudiments of the controversy had been disclosed in the preceding decade.

On the other hand, the period between Darwin's two important books had seen, as a rule, only isolated debate over the fragments of the theory of moral evolution by natural selection, but, after *The Descent of Man* had assembled those fragments, the entire question came into the arena of conflict. *The Descent of Man*, then, inaugurated the controversial stage in the development of evolutionary ethics.

Darwin devotes three chapters of *The Descent of Man* to the evolution of moral being. In the first of these—chapter two—we find brought out in the comparison of the mental powers of the animals with those of man that these powers differ in degree but not in kind. This general idea and its more important details had been discussed before the appearance of *The Descent of Man*, as Darwin acknowledges. In the next chapter, Darwin discusses the moral sense, and likewise, in finding its origin in the social instincts, he was not proposing a new idea. But in the fullness with which he worked out his conception, and in some of his details, notably that of the genesis of the idea of "ought" in the conflict of instinctive impulses and the subsequent reflection of an intelligent agent, he was original. His more significant omissions of concepts which were available to him from the work of the sixties, particularly those of the origin of the social instincts and the ultimate source of morality in the principles of organization of organisms, were perhaps due to his caution in view of the lack of definite evidence. In the last of his three chapters—chapter five—Darwin brings together most of the ideas of the previous decade about the evolution of man's moral nature. He draws on Wallace, McLennan, Tylor, Galton, Bagehot, Greg, and Lubbock, to name only his more important sources. He does not include the factor of imitation, nor does he more than glance at the effect of the development of an ethical religion as an element in the evolution of morality. He does strongly insist on the power of habit as a co-factor of natural selection in the progress of man's moral and intellectual faculties. This is his most original contribution, and is probably the result

of a feeling that natural selection alone is not sufficient to account for the development of such qualities.

What has just been said of Darwin's chapter five may be repeated for his entire discussion of the moral faculty of man: it is a résumé of the ideas of the previous decade developed on that subject from the point of view of the evolution of man. Darwin's real contribution consisted in gathering together the more significant and less problematical of those ideas and in shaping them into a consistent and coherent theory of the origin, nature, and development of the moral being of man. To this theory he contributed two important details: (1) the genesis of "ought" in the conflict of instinctive impulses, and the subsequent reflection of an intelligent creature upon his resulting conduct; (2) habit as a co-factor of importance to natural selection. So explicit a presentation of the theory of the evolution of moral being as Darwin provided could not fail, especially when it was coupled with his name, to attract attention and controversy, although the same ideas had gone largely unnoticed in their scattered presentation during the 1860's.

